

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (cancelled)
2. (currently amended) An image sensing apparatus comprising:
  - a signal generator adapted to generate a signal upon reception of input light;
  - a transfer unit adapted to transfer the signal generated by said signal generator;
  - a temperature measuring unit adapted to measure a temperature;
  - an amplification unit adapted to amplify the signal transferred from said transfer unit; and
  - a control unit adapted to control to decrease a gain when a temperature measured by said temperature measuring unit is higher than a predetermined temperature and increase the gain when the temperature measured by said temperature measuring unit is lower than the predetermined temperature, wherein said predetermined temperature is set such that dark current of said amplification unit does not exceed a predetermined value.
3. (cancelled)
4. (currently amended) The apparatus according to claim [[1]]2, wherein the apparatus further comprises a calculation unit adapted to calculate a correlation between at least two signals amplified by said amplification unit.

5. (original)The apparatus according to claim 4, wherein said signal generator comprises a plurality of light-receiving units adapted to receive object images and generates said at least two signals.
- 6.. (currently amended)The apparatus according to claim [[1]]2, wherein said transfer unit comprises at least two transfer units, and while said amplification unit amplifies a signal transferred from one transfer unit, said amplification unit does not amplify a signal transferred from the other transfer unit.
7. (currently amended) The apparatus according to claim [[1]]2, wherein the apparatus further comprises a light projection unit adapted to project light to an object, and said signal generator receives light reflected by the object and generates a signal upon ON/OFF operation of said light projection unit.
8. (currently amended) The apparatus according to claim [[1]]2, further comprising a skim unit adapted to remove a predetermined amount of charge from a charge transferred from said transfer unit.
9. (currently amended) The apparatus according to claim [[1]]2, wherein said transfer unit comprises a charge transfer unit at least part of which is coupled in a ring shape.

Claims 10-46 (cancelled)